

AMENDMENTS TO THE CLAIMS

1-21. (Canceled)

22. (Previously Added) A disc screen apparatus for classifying mixed recyclable materials, comprising:

a frame;

a plurality of shafts;

a plurality of discs mounted on the shafts shaped for agitating mixed recyclable materials;

means for rotatably supporting the shafts on the frame so that the discs of adjacent shafts are interleaved and define a laterally inclined trough and a pair of vertically inclined regions extending from opposite sides of the trough; and

drive means connected to the shafts for rotating the shafts so that mixed recyclable materials deposited on the trough will be divided into streams passing through the discs, over the upper ends of the inclined regions, and off a lower end of the trough.

23. (Previously Added) The disc screen apparatus of Claim 22 and further comprising means for varying an angle of inclination of the laterally inclined trough.

24. (Previously Added) The disc screen apparatus of Claim 22 and further comprising means for varying an angle of inclination of at least one of the inclined regions.

25. (Previously Added) The disc screen apparatus of Claim 22 and further comprising means for blowing air against the inclined regions.

26. (Previously Added) The disc screen apparatus of Claim 22 wherein a first portion of the discs of the trough and the discs of a first one of the inclined regions are rotated in a first direction and a second portion of the discs of the trough and the discs of a second one of the inclined regions are rotated in a second direction opposite the first direction.

27. (Previously Added) The disc screen apparatus of Claim 22 wherein discs of the
trough are spaced so that broken glass will fall therebetween while containers will tumble off the
lower end of the trough, and the discs of the inclined regions are spaced and the angle of inclination
of the inclined regions is selected so that newspaper will be conveyed over the upper ends of the
inclined regions.

28. (Previously Added) A disc screen apparatus for classifying mixed recyclable
materials, comprising:

a frame;
a plurality of shafts;
a plurality of discs mounted on the shafts shaped for agitating mixed recyclable materials;
a plurality of bearings rotatably supporting the shafts on the frame in mounting positions so
that the discs of adjacent shafts are interleaved and define a laterally inclined trough and a pair of
inclined regions extending from opposite sides of the trough; and

a drive mechanism for rotating a first portion of the discs of the trough and the discs of a first
one of the inclined regions in a first direction and a second portion of the discs of the trough and the
discs of a second one of the inclined regions in a second direction opposite the first direction.

29. (Previously Added) The disc screen apparatus of Claim 28 and further comprising
means for varying an angle of inclination of the laterally inclined trough.

30. (Previously Added) The disc screen apparatus of Claim 28 and further comprising
means for varying an angle of inclination of at least one of the inclined regions.

31. (Previously Added) The disc screen apparatus of Claim 28 and further comprising
means for blowing air against the inclined regions.

32. (Previously Added) The disc screen apparatus of Claim 28 wherein the discs are
spaced so that mixed recyclable materials deposited on the trough will be divided into streams

4 passing through the discs, over the upper ends of the inclined regions, and off a lower end of the
trough.

2 33. (Previously Added) The disc screen apparatus of Claim 28 wherein discs of the
trough are spaced so that broken glass will fall therebetween while containers will tumble off the
lower end of the trough, and the discs of the inclined regions are spaced and the angle of inclination
4 of the inclined regions is selected so that newspaper will be conveyed over the upper ends of the
inclined regions.

2 34. (Currently Amended) An apparatus for classifying mixed recyclable materials,
~~comprising~~ comprising:

4 a generally V-shaped disc screen including a plurality of interleaved discs defining a laterally
inclined trough and a pair of inclined regions extending from opposite sides of the ~~trough~~ trough;
and wherein the discs are configured and spaced so that mixed recyclable materials deposited
6 on the trough will be divided into streams passing through the discs, over the upper ends of the
inclined regions, and off a lower end of the trough.

2 35. (Currently Amended) An apparatus for classifying mixed recyclable materials,
comprising:

4 a disc screen including a plurality of interleaved discs configured to agitate mixed recyclable
materials and defining a laterally inclined trough and a pair of inclined regions extending from
opposite sides of the ~~trough~~ trough; and

6 wherein the discs are spaced apart so that mixed recyclable materials deposited on the trough
will be divided into a plurality of streams.

2 36. (Currently Amended) An apparatus for classifying mixed recyclable materials,
comprising:

4 a disc screen including a plurality of interleaved discs configured to agitate mixed recyclable
materials and defining a laterally inclined trough and a pair of inclined regions extending from
opposite sides of the trough; and

6 means for varying an angle of inclination of the inclined regions for optimizing flow of a
portion of the mixed recyclable materials up the inclined regions and over a pair of upper ends of
8 the inclined regions.

2 37. (Previously Added) The apparatus of Claim 36 and further comprising means for
varying an angle of inclination of the trough for optimizing flow of a second portion of the mixed
recyclable materials off of a lower end of the trough.

2 38. (Currently Amended) An apparatus for classifying mixed recyclable materials,
comprising:

4 a disc screen including a plurality of interleaved discs configured to agitate mixed recyclable
materials and defining a laterally inclined trough and a pair of inclined regions extending from
opposite sides of the trough; and

6 means for varying an angle of inclination of the ~~inclined~~ trough.

2 39. (Currently Amended) An apparatus for classifying mixed recyclable materials,
~~comprising~~ comprising:

4 a generally V-shaped disc screen including a plurality of interleaved discs defining a laterally
inclined trough and a pair of inclined regions extending from opposite sides of the trough and means
for rotating the discs, and

6 wherein the discs are configured, spaced and rotatable at predetermined speeds in the
appropriate directions so that mixed recyclable materials deposited on the trough will be divided into
8 streams passing through the discs, over the upper ends of the inclined regions, and off a lower end
of the trough.

2 40. (Currently Amended) An apparatus for classifying mixed recyclable materials,
comprising:

4 a disc screen including a plurality of interleaved discs configured to agitate mixed recyclable
materials and defining a laterally inclined trough and a pair of inclined regions extending from
opposite sides of the trough and means for rotating the discs, and wherein the discs are configured,

6 spaced apart and rotatable at predetermined speeds in the appropriate directions so that mixed
recyclable materials deposited on the trough will be divided into a plurality of streams.

41. (Currently Amended) An apparatus for classifying mixed recyclable materials,
2 comprising:

a disc screen including a plurality of interleaved discs mounted on rotatable shafts and
4 configured to agitate mixed recyclable materials and defining a laterally inclined trough and a pair
of inclined regions extending from opposite sides of the trough;

6 means for rotating the shafts in predetermined directions; and

means for varying an angle of inclination of the inclined regions for optimizing flow of a
8 portion of the mixed recyclable materials up the inclined regions and over a pair of upper ends of
the inclined regions.

42. (Previously Added) The apparatus of Claim 41 and further comprising means for
2 varying an angle of inclination of the trough for optimizing flow of a second portion of the mixed
recyclable materials off of a lower end of the trough.

43. (Currently Amended) An apparatus for classifying mixed recyclable materials,
2 comprising:

a disc screen including a plurality of interleaved discs mounted on rotatable shafts and
4 configured to agitate mixed recyclable materials and defining a laterally inclined trough and a pair
of inclined regions extending from opposite sides of the trough;

6 means for rotating the shafts in predetermined directions; and

means for varying an angle of inclination of the ~~inclined~~ trough.

44. (Currently Amended) An apparatus for classifying mixed recyclable materials,
2 comprising:

a frame having a pair of opposite sides and including a base and a pair of inclined sections
4 mounted to the base to define a generally V-shaped configuration; ~~—~~

means for varying an angle of inclination of the frame;

6 a plurality of shafts each having hollow ends;
means for rotatably mounting the ends of each of the shafts to the sides of the frame so that
8 the shafts extend in a longitudinally spaced apart, substantially parallel relation, at a plurality of
different vertical heights to follow the generally V-shaped configuration, including a resilient
10 deformable plug inserted into an end of a corresponding shaft, a stub shaft inserted into a hollow
interior opening in the plug, and at least one bearing assembly supported by a corresponding side
12 of the frame, the stub shaft having a portion journaled in the bearing assembly;
drive means for rotating the shafts in predetermined directions; and
14 the first and second vertically inclined regions being configured so that a portion of the
stream of mixed recyclable materials deposited onto the lowermost region ~~can be~~ is conveyed
16 up the inclined regions and over a pair of terminal upper ends of the inclined regions when the shafts
are rotated in predetermined directions.